

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: ) Group Art Unit: 2446  
Edward Eytchison *et al.* ) Examiner: Ali, Farhad  
Serial No.: 10/763,866 )  
Filed: January 22, 2004 )  
For: **METHODS AND** )  
**APPARATUSES FOR** )  
**AUTOMATIC ADAPTATION OF** )  
**DIFFERENT PROTOCOLS** )  
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Customer No. 28960

**REPLY BRIEF IN RESPONSE TO  
EXAMINER'S ANSWER**

Mail Stop Appeal Brief - Patents  
Commissioner for Patents  
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Sir:

In reply to the Examiner's Answer mailed on May 13, 2010, this Reply Brief is hereby submitted. Claims 1, 2, 4-11, 13, 15-20 and 22-24 have been rejected. The Appellant submits this brief to the Board of Patent Appeals and Interferences in compliance with the requirements of 37 C.F.R. § 41.41, as stated in *Rules of Practice Before the Board of Patent Appeals and Interferences (Final Rule)*, 69 Fed. Reg. 49959 (August 12, 2004).

The Appellant contends that the rejection of Claims 1, 2, 4-11, 13, 15-20 and 22-24 in this pending application is in error and should be overcome by this appeal. The appellant further contends that the Warren and Lozinski references do not support the rejection of Claims 1, 2, 4-11, 13, 15-20 and 22-24.

**I. SUMMARY OF THE CLAIMED INVENTION**

The invention disclosed in the present application number 10/763,866 is directed to methods and apparatuses for translating commands formatted in different protocols into a common application programming interface. The methods and apparatuses detect at least one device; detect a protocol associated with each device; match the protocol with a protocol translator module; and translate a command formatted in the protocol into a translated command formatted in a common application programming interface through the protocol translator module.

**II. ARGUMENTS RELATED TO REJECTION OF CLAIMS 1, 2, 4-11, 13, 15-20 and 22-24**

**A. The teachings of Warren**

Warren teaches an abstraction device with a web services interface. The abstraction device receives web services commands in XML documents, translates the web services commands into one or more device commands in one or more device protocols, and transmits the device commands to one or more network elements. [Warren, ¶¶ 0006, 0024, 0025]. Warren teaches two different implementations of its abstraction device. [Warren, Fig. 1, elements 106a, 106b; Fig. 2, element 206] However, Warren does not teach 1) *searching for at least one device based on content type*. Instead, Warren already knows the location and type of web service (content) of its devices because they are *published*. [See Warren ¶ 0024]. Further, Warren does not teach 2) *matching* the detected protocol with a protocol translator. Instead, Warren teaches that its protocol translators are all always loaded and thus no matching is required or possible. Moreover, as recognized within the Office Action, Warren does not teach 3) a *single* common application programming interface that is configured to be used by a *plurality* of applications. [Office Action of June 22, 2009, page 3] Additionally, Warren does not teach 4) storing a list of network protocols available for use and *displaying* an indication of each device having a device protocol that is compatible with one of the plurality of protocol translator modules. Accordingly, Warren does not teach the presently claimed invention.

Within the Examiner's Answer it is asserted that "searching for a device based on content type reads upon Warren's locating a network element wherein network elements may be divided into groups or device types based on communication protocols." [Examiner's Answer, page 26] In other words, it is asserted that because 1) the devices of Warren are able to be organized based on their type of communication protocol and 2) the devices are able to be located, it follows that

the locating of devices in a particular communication protocol group is the same as searching for devices based on [their] content type. The Applicant respectfully disagrees. Firstly, the mere locating of a device that has been organized based on its communication protocol is not the same as searching *based on* a content type. Instead, the locating taught in Warren is unrelated to the protocol type. Indeed, to search for something it first has to be unknown and in Warren the communication protocols of the devices are already known due to their publication. Thus, Warren does not teach searching because there is nothing unknown in Warren to search for. Secondly, even if Warren did teach searching, Warren still fails because a “content type” is not the same as a “communication protocol.” Instead, a content type is referring to the type of media/data produced by the device. For example, a cd player produces audio content (e.g. wave, mp3, etc...). Contrarily, a communication protocol refers to the type of programming code/commands that are understood by the device’s processor (e.g. SOAP, COBRA, etc...) regardless of the type of data/content that is produced by the device. [See Warren, ¶ 0053] Therefore, at best, Warren can only teach searching based on communication protocol, not based on content type. Accordingly, Warren does not teach searching for at least one device based on content type.

Also within the Examiner’s Answer, it is asserted that Warren teaches storing a list of network protocols available for use and *displaying* an indication of each device having a device protocol that is compatible with one of the plurality of protocol translator modules because “Warren’s teachings of identifying the communications protocol used by the network element and translating device commands constitutes an indication of the device having a device protocol that is compatible with one of the plurality of protocol translator modules.” [Examiner’s Answer, page 34] In other words, it is asserted that the performance of the translation by Warren teaches the indication of the presently claimed invention. However, the claimed limitation does not simply recite any type of indication, it requires an indication that is “displayed” (i.e. a visual indication). As a result, the performance of the translation by Warren does not teach the indication, because the performance is not displayed. Indeed, nowhere in Warren is it taught that the translation is displayed in any manner. Thus, Warren does not teach storing a list of network protocols available for use and *displaying* an indication of each device having a device protocol that is compatible with one of the plurality of protocol translator modules.

**B. The teachings of Lozinski**

Lozinski teaches an application programming interface in a data processing system with multiple communication adapters for a particular service type, such as ISDN. [Lozinski, col. 1, lines 40-46]. Specifically, Lozinski teaches that the complex configuration for the end user is avoided because no knowledge of the presence of one manufacturer's product by another is required. [Lozinski, col. 1, lines 65-57]. However, Lozinski does not teach 1) searching for at least one device based on content type or 2) matching the detected protocol with a protocol translator. Further, Lozinski does not teach 3) a *single* common application programming interface that is configured to be used by a *plurality of applications* or 4) storing a list of network protocols available for use and *displaying* an indication of each device having a device protocol that is compatible with one of the plurality of protocol translator modules. Nowhere does Lozinski teach such limitations.

Within the Examiner's Answer, Lozinski is only cited for the purpose of teaching a *single* common application programming interface that is configured to be used by a *plurality* of applications. However, Lozinski does not teach 3) a *single* common application programming interface that is configured to be used by a *plurality of applications*. Instead, Lozinski only teaches a plurality of *programs* 130, 140, 150, and a single *application* 120. Indeed, because Lozinski only teaches a single application, it clearly cannot teach that a plurality of applications are able to use the API. [See Lozinski, Fig. 2 and col. 3, lines 2-8] Therefore, Lozinski does not teach a *single* common application programming interface that is configured to be used by a *plurality of applications*. Within the Examiner's Answer, the assertion that Lozinski teaches a single common application programming interface that is configured to be used by a plurality of applications is justified by Lozinski's teaching that "application programs can communicate across the communications networks via communications adapters 90, 100, 110 using a programming interface to communicate with programs controlling the adapters." [Examiner's Answer, page 28] The Applicants respectfully disagree. The phrase "application programs" described in the above-cited portion of Lozinski is only a general statement indicating that if the invention of Lozinski were proliferated, the *multiple* instances of the invention would result in multiple "application programs" being able to communicate with their respective APIs. It is not an indication that in a *single* instance of the invention of Lozinski that multiple applications would be able to communicate with a single API. Instead, again, Lozinski teaches a single application 120 that is able to use a single API 160 to communicate with programs 130, 140, 150. [Lozinski, Fig. 2]. Accordingly, Lozinski does not teach a *single* programming interface that is configured to be used by a *plurality of applications*.

C. **The teachings of the combination of Warren and Lozinski.**

Because neither Warren or Lozinski teach 1) *searching for at least one device based on content type*, 2) *matching* the detected protocol with a protocol translator, 3) a *single* common application programming interface that is configured to be used by a *plurality* of applications or 4) storing a list of network protocols available for use and *displaying* an indication of each device having a device protocol that is compatible with one of the plurality of protocol translator modules, nor can their combination. Accordingly, neither Warren, Lozinski nor their combination teach the presently claimed invention.

In contrast to the teachings of Warren, Lozinski and their combination, the presently claimed invention teaches a lightweight, common application programming interface to be used by multiple applications in searching devices containing a type of content. [Present Specification, page 2, lines 14-15]. An application includes a list of available network protocols. In the presently claimed invention, at least one device is *searched for* based on a content type, the at least one device is detected, the protocol associated with the detected device is detected, the detected protocol associated with the device is matched with the device, a protocol translator module is matched with the protocol, *and the protocol translator is loaded*, then the translator module is used to translate a command formatted in the device protocol into a translated command formatted in a common application programming interface that is configured to be *used by a plurality of applications*. [Present Specification, page 11, line 17 to page 17, line 2] Thus, the presently claimed invention creates a lightweight run-time binding by *only loading the protocol translator module(s) which correspond to the at least one device found by virtue of being searched for based on its content*. [Present Specification, page 4, line 2]. As discussed above, neither Warren, Lozinski nor their combination teach 1) *searching for at least one device based on content type*, 2) *matching* the detected protocol with a protocol translator, 3) a *single* common application programming interface that is configured to be used by a *plurality* of applications or 4) storing a list of network protocols available for use and *displaying* an indication of each device having a device protocol that is compatible with one of the plurality of protocol translator modules.

The independent Claim 1 is directed to a method comprising searching for at least one device based on a content type, detecting the at least one device, detecting a protocol associated with each device, matching the detected protocol with a protocol translator module, and using the protocol translator module to translate a command formatted in the protocol into a translated command formatted in a common application programming interface, wherein the common

application programming interface is a single application programming interface that is configured to be used by a plurality of applications. As discussed above, Warren, Lozinski, and their combination do not teach *searching for at least one device based on a content type*. As also discussed above, Warren, Lozinski, and their combination, do not teach detecting at least one device, detecting a protocol associated with the device, and matching the protocol with a protocol translator. Further, as discussed above, Warren, Lozinski, and their combination, do not teach *a single application programming interface that is configured to be used by a plurality of applications*. For at least these reasons, the independent Claim 1 is allowable over the teachings of Warren, Lozinski and their combination.

Claims 2 and 4-6 are all dependent on the independent Claim 1. As described above, the independent Claim 1 is allowable over the teachings of Warren, Lozinski and their combination. Accordingly, Claims 2 and 4-6 are all also allowable as being dependent on an allowable base claim.

The independent Claim 7 is directed to a system comprising means for searching for at least one device based on a content type, means for detecting the at least one device, means for detecting a protocol associated with each device, means for matching the detected protocol with a protocol translator module, and means for using the protocol translator module to translate a command formatted in the protocol into a translated command formatted in a common application programming interface, wherein the common application programming interface is a single application programming interface that is configured to be used by a plurality of applications. As discussed above, Warren, Lozinski, and their combination do not teach *searching for at least one device based on a content type*. As also discussed above, Warren, Lozinski, and their combination, do not teach detecting a protocol associated with the device, and matching the protocol with a protocol translator. Further, as discussed above, Warren, Lozinski, and their combination, do not teach *a single application programming interface that is configured to be used by a plurality of applications*. For at least these reasons, the independent Claim 7 is allowable over the teachings of Warren, Lozinski and their combination.

The independent Claim 8 is directed to a method comprising searching for at least one service based on a content type, detecting the at least one service, detecting a protocol associated with each service, matching the detected protocol with a protocol translator module, and using the protocol translator module to translate a command formatted in the protocol into a translated command formatted in a common application programming interface, wherein the common application programming interface is a single application programming interface that is configured to be used by a plurality of applications. As discussed above, Warren, Lozinski, and their combination do not teach *searching for at least one device based on a content type*. As also discussed above, Warren, Lozinski, and their combination, do not teach detecting at least one device, detecting a protocol associated with the device and matching the protocol with a protocol translator. Further, as discussed above, Warren, Lozinski, and their combination, do not teach *a single application programming interface that is configured to be used by a plurality of applications*. For at least these reasons, the independent Claim 8 is allowable over the teachings of Warren, Lozinski and their combination.

The independent Claim 9 is directed to a method comprising searching for a specific device from a plurality of devices based on a content type, detecting the plurality of devices

wherein each unique device communicates using a corresponding protocol, displaying an indication of each device if a protocol translator module is matched with the corresponding protocol, and translating a command formatted in the corresponding protocol into a translated command formatted in a common application programming interface through the protocol translator module, wherein the common application programming interface is a single application programming interface that is configured to be used by a plurality of applications. As discussed above, Warren, Lozinski, and their combination do not teach *searching for at least one device based on a content type*. As also discussed above, Warren, Lozinski, and their combination, do not teach detecting at least one device, detecting a protocol associated with the device and matching the protocol with a protocol translator. Further, as discussed above, Warren, Lozinski, and their combination, do not teach *a single application programming interface that is configured to be used by a plurality of applications*. For at least these reasons, the independent Claim 9 is allowable over the teachings of Warren, Lozinski and their combination.

Claims 10, 11, 13, 15 and 16 are all dependent on the independent Claim 9. As described above, the independent Claim 9 is allowable over the teachings of Warren, Lozinski and their combination. Accordingly, Claims 10, 11, 13, 15 and 16 are all also allowable as being dependent on an allowable base claim.

The independent Claim 17 is directed to a method comprising identifying a plurality of protocol translator modules wherein each protocol translator module is associated with a unique protocol, storing a list representing the plurality of protocol translator modules, displaying an indication of each device having a device protocol that is compatible with one of the plurality of protocol translator modules in the list, and translating a command formatted in the device protocol into a translated command formatted in a common application programming interface through one of the plurality of protocol translator modules, wherein the common application programming interface is a single application programming interface that is configured to be used by a plurality of applications. As discussed above, Warren, Lozinski, and their combination, do not teach storing a list of network protocols available for use and displaying an indication of each device having a device protocol that is compatible with one of the plurality of protocol translator modules. Further, as discussed above, Warren, Lozinski, and their combination, do not teach *a single application programming interface that is configured to be used by a plurality of applications*. For at least these reasons, the independent Claim 17 is allowable over the teachings of Warren, Lozinski and their combination.

Claims 18 and 19 are both dependent on the independent Claim 17. As described above, the independent Claim 17 is allowable over the teachings of Warren, Lozinski and their

combination. Accordingly, Claims 18 and 19 are both also allowable as being dependent on an allowable base claim.

The independent Claim 20 is directed to a system comprising a plurality of applications configured for operating through a single, common application programming interface, a first device configured for operating using a first protocol, a second device configured for operating using a second protocol and a protocol translation layer configured for searching for a first protocol translation module corresponding to the first protocol and for searching for a second protocol translation module corresponding to the second protocol, the first protocol translation module and second protocol translation module stored in a list representing a plurality of protocol translator modules, wherein the protocol translation layer is configured to translate a first command formatted in the first protocol into a command formatted in the single, common application programming interface for use by one of the plurality of applications and to translate a second command formatted in the second protocol into a command formatted in the single, common application programming interface for use by another one of the plurality of applications. As discussed above, Warren, Lozinski, and their combination, do not teach storing a list of network protocols available for use and displaying an indication of each device having a device protocol that is compatible with one of the plurality of protocol translator modules. Further, as discussed above, Warren, Lozinski, and their combination, do not teach *a single application programming interface that is configured to be used by a plurality of applications*. For at least these reasons, the independent Claim 20 is allowable over the teachings of Warren, Lozinski and their combination.

Claim 22 is dependent on the independent Claim 20. As described above, the independent Claim 20 is allowable over the teachings of Warren, Lozinski and their combination. Accordingly, Claim 22 is also allowable as being dependent on an allowable base claim.

The independent Claim 23 is directed to a network protocol translation system comprising a processor that executes a plurality of run time processes that use only a single application programming interface for network communication, wherein the processor enables at least one of the run time processes to communicate via a first network protocol by executing a first translation module that translates between the first network protocol and the single application programming interface and wherein the processor enables the at least one of the run time processes to communicate via a second network protocol, different from the first network protocol, by executing a second translation module that translates between the second network protocol and the application programming interface, further wherein the first translation module and second translation module are stored in a list representing a plurality of protocol translator

modules. As discussed above, Warren, Lozinski, and their combination, do not teach storing a list of network protocols available for use and displaying an indication of each device having a device protocol that is compatible with one of the plurality of protocol translator modules. Further, as discussed above, Warren, Lozinski, and their combination, do not teach *a single application programming interface that is configured to be used by a plurality of applications*. For at least these reasons, the independent Claim 23 is allowable over the teachings of Warren, Lozinski and their combination.

The independent claim 24 is directed to a method, executed on a computing platform, comprising the acts of executing a plurality of run time processes that uses only a single application programming interface for network communication, enabling at least one of the run time processes to communicate via a first network protocol by executing a first translation module that translates between the first network protocol and the single application programming interface and enabling the at least one of the run time processes to communicate via a second network protocol, different from the first network protocol, by executing a second translation module that translates between the second network protocol and the single application programming interface, wherein the first translation module and second translation module are stored in a list representing a plurality of protocol translator modules. As discussed above, Warren, Lozinski, and their combination do not teach executing a plurality of run time processes that uses only a single application programming interface for network communication. For at least these reasons, the independent Claim 24 is allowable over the teachings of Warren, Lozinski and their combination.

### **III. CONCLUSION**

For the reasons stated above, it is respectfully submitted that Claims 1, 2, 4-11, 13, 15-20 and 22-24 are allowable over the teachings of Warren, Lozinski and their combination. Therefore, a favorable indication is respectfully requested.

Respectfully submitted,  
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